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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,486	04/19/2001	Maurice W. Peterson	00CR020/KE	8926

7590 09/16/2004

ROCKWELL COLLINS, INC.

Attention: Kyle Eppele  
M/S 124-323  
400 Collins Rd. NE  
Cedar Rapids, IA 52498

EXAMINER
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LUGO, DAVID B

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/838,486

Applicant(s)

PETERSON, MAURICE W.

Examiner

David B. Lugo

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 9-17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by MacDonald et al. U.S. Patent 5,504,453.

3. Regarding claims 1, 11 and 12, MacDonald et al. disclose a method and system for estimating phase error where a receiver receives a waveform sent from a transmitter (col. 1, lines 6-18), estimates the phase error present in the waveform (col. 3, lines 10-18), and compensates for the phase error (col. 2, lines 7-10), where the technique used, described in column 3, line 48 to column 6, line 29, is considered a maximum abscissa technique.

4. Regarding claims 2-5, 9, 10, 13-15, 19 and 20, since the method used in MacDonald et al. is a maximum abscissa technique, MacDonald et al. is considered to anticipate the limitation of a phase error being estimated via at least one of a half angle technique, wherein the half angle technique is further detailed in claims 9, 10, 19 and 20, a maximum abscissa technique, and a minimum to maximum envelope ratio technique, wherein the minimum to maximum envelope ratio technique is further detailed in claims 2-5 and 13-15, as claims 2-5, 9, 10, 13-15, 19 and 20 do not require the steps recited therein to be performed when an alternate technique is used.

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5. To overcome the aforementioned rejection of claims 2-5, 9, 10, 13-15, 19 and 20, it is suggested that the claims be written so that the specific technique defined in the dependent claims (i.e. half angle technique in claims 2 and 13, and minimum to maximum envelope ratio technique in claims 9 and 19) is positively recited as being performed.

6. Regarding claims 6 and 16, MacDonald et al. disclose that a maximum abscissa value (I) is determined, and an index (X) of the abscissa value is determined and used to generate a phase error estimate (col. 3, lines 60-65) utilizing an arctangent trigonometric calculation (see claim 7).

7. Regarding claims 7 and 17, the maximum abscissa technique is performed for each I, Q pair.

8. Claims 1-8 and 11-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee U.S. Patent 6,356,599.

9. Regarding claims 1, 11 and 12, Lee discloses a device and method for estimating phase error in Figure 5 where a waveform is received by an analog front end, an estimate of a phase error is made by phase error estimator 515, and is used to compensate for the phase error (col. 7, lines 11-16), where the technique used, described in column 7, lines 17-67, is broadly considered a half angle technique.

10. Regarding claims 2-8 and 13-18, Lee is considered to anticipate the limitation of a phase error being estimated via at least one of a half angle technique, a maximum abscissa technique, wherein the maximum abscissa technique is further detailed in claims 6-8 and 16-18, and a minimum to maximum envelope ratio technique, wherein the minimum to maximum envelope ratio technique is further detailed in claims 2-5 and 13-15, as claims 2-8 and 13-18 do not require the steps recited therein to be performed when an alternate technique is used.

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11. To overcome the aforementioned rejection of claims 2-8 and 13-18, it is suggested that the claims be written so that the specific technique defined in the dependent claims is positively recited as being performed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David B. Lugo** whose telephone number is **(571) 272-3043**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jay Patel**, can be reached at **(571) 272-2988**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450

**or faxed to:**

**(703) 872-9306**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dl  
9/2/04

  
**KHAI TRAN**  
**PRIMARY EXAMINER** 9/14/04